Message

From: Sappington, Keith [Sappington.Keith@epa.gov]
Sent: 5/13/2019 6:26:44 PM
To: Niesen, Meghann [Niesen.Meghann@epa.gov]; Mroz, Ryan [Mroz.Ryan@epa.gov]
Subject: FW: blooming period + IMI 2016
Attachments: 129099_D429937_Other_01-04-2016.pdf

From: Housenger, Justin
Sent: Thursday, May 09, 2019 12:18 PM
To: Sappington, Keith <Sappington.Keith@epa.gov>
Subject: FW: blooming period

From: Myers, Clayton
Sent: Friday, October 16, 2015 10:39 AM
To: Housenger, Justin <Housenger.Justin@epa.gov>
Cc: Cook, Colwell <cook.colwell@epa.gov>; Mallampalli, Nikhil <Mallampalli.Nikhil@epa.gov>; Becker, Jonathan <Becker.Jonathan@epa.gov>; Chism, William <Chism.Bill@epa.gov>; Suarez, Mark <Suarez.Mark@epa.gov>; Hill, Elizabeth <Hill.Elizabeth@epa.gov>
Subject: RE: blooming period

Justin,

So to clarify, I presume you are interested in the typical blooming time for a given field, as opposed to the typical time per flower?

I think BEAD should be able to come up with some reasonable estimates on the former, depending on available sources. A number of the crops you listed are indeterminate blooming crops, where blooming and fruiting can continue for multiple months; this is especially true for citrus, cotton, melons/cucurbits, and strawberries (newer ever-bearing varieties can be harvested for up to 6 months in California, for example, with continuous bloom occurring throughout).

Stone fruits and tree nuts tend to bloom over a much tighter time window, though it is dependent somewhat on local temperatures. 1-3 weeks would be a reasonable estimate for most pome and stone fruits. Blueberries would typically bloom over a similarly tight period too. I'm not as familiar with bloom times for canola, artichokes, peanuts, legumes, etc., nor when pollen would be available from the cereal grain crops--at least not off the top of my head. Tobacco is intentionally de-flowered for optimal leaf production, so I'm not sure how relevant that crop would be for bee exposure. I can talk to the team about the best info sources and get back to you next week.

Others on the team, please feel free to respond here if you have additional thoughts. Otherwise, we can try to meet sometime next week to scope this out further. Justin, what is your timeframe for getting estimates? Would you want a BEAD memo, or would this just be an informal response? If the numbers are going to be used and cited in a risk assessment, we should probably formalize a memo at some point down the road.

Clayton T. Myers, Ph.D
Entomologist/Biologist
U.S. Environmental Protection Agency
Office of Pesticide Programs
Biological Analysis Branch--BEAD

Phone: (703) 347-8874
Email: myers.clayton@epa.gov

REGULAR TELEWORK DAYS: All Mondays and the second Friday of each pay period. Telework Phone Number: 304-995-1905

From: Housenger, Justin
Sent: Friday, October 16, 2015 10:00 AM
To: Myers, Clayton <Myers.Clayton@epa.gov>
Subject: blooming period

Hi Clayton,

Hope you are doing well.

I was wondering if you had any resources or could point me to someone who does (perhaps within BEAD) that has information on the blooming duration of major agricultural crops. Realizing that the duration may differ of the same crop grown in different areas of the country, I assume there actual period would be relatively uniform. What we're trying to do is put the information from field residues studies of imidacloprid (where we get pollen and nectar data) including the DT50 of the residues over time into context with the blooming duration of a crop to further characterize exposure. Specifically the crops we have resides for, and therefore the blooming duration information that would be most informative would be for these crop groups

- Cucurbit vegetables (melon specifically)
- Citrus
- Stone fruits (cherries specifically)
- Small fruit and berries group (blueberries and strawberries specifically)
- Cereal grains (corn specifically)
- Oilseed group (cotton specifically)

Additionally, blooming duration information would be useful on legumes (soybean), tree nuts, artichoke, peanuts, and tobacco.

Thanks in advance for any information,
Justin